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JUN 04 2003

TECH CENTER



1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/674,779B

DATE: 05/27/2003

TIME: 09:51:56

Input Set : A:\BM45311SEQLIST.TXT

Output Set: N:\CRF4\05272003\I674779B.raw

4 <110> APPLICANT: Jean-Louis Ruelle
 6 <120> TITLE OF INVENTION: BASB019 Proteins and Genes from
 7 Moraxella Catarrhalis Antigens, Antibodies, and Uses
 10 <130> FILE REFERENCE: BM45311
 12 <140> CURRENT APPLICATION NUMBER: US 09/674,779B
 13 <141> CURRENT FILING DATE: 2001-01-03
 15 <150> PRIOR APPLICATION NUMBER: PCT/EP/99/03038
 16 <151> PRIOR FILING DATE: 1999-05-03
 18 <150> PRIOR APPLICATION NUMBER: GB9809683.7
 19 <151> PRIOR FILING DATE: 1998-05-06
 21 <160> NUMBER OF SEQ ID NOS: 14
 23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 25 <210> SEQ ID NO: 1
 26 <211> LENGTH: 519
 27 <212> TYPE: DNA
 28 <213> ORGANISM: Moraxella catarrhalis
 30 <400> SEQUENCE: 1
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 32 acaggctgtg ccaataaaatc aacaagtcaa gttatgggtg ctcctaatgc acccacaggt 60
 33 tacactgggg ttatctatac tgggtgttgcg ccttggtag ataatgtatg gaccgttaag 120
 34 gctctggcaa gcaagctacc cagtttggtt tattttgact ttgattctga tgagattaaa 180
 35 ccgcaagctg ctgcacatctt agacgaacaa gcacaatttt taaccaccaa tcaaacagct 240
 36 cgtgttttgg ttgcaggtca taccgatgag cgtggtagtc gtgagtataa tatgtcactg 300
 37 ggggaacgcc gtgcgggtggc ggtacgcaac tatttgcttg gtaaaaggcat taatcaagcc 360
 38 agcgttggaga ttatcagttt tggtaagaa cgccctatcg catttggcac aaatgaagaa 420
 39 gcatggtcac aaaatcgctcg tgctgaactg tcttattaa 480
 41 <210> SEQ ID NO: 2
 42 <211> LENGTH: 172
 43 <212> TYPE: PRT
 44 <213> ORGANISM: Moraxella catarrhalis
 46 <400> SEQUENCE: 2
 47 Met Met Ile His Ile Gln Ile Ala Ala Ala Ala Ala Ala Leu Ser Val
 48 1 5 10 15
 49 Leu Thr Phe Met Thr Gly Cys Ala Asn Lys Ser Thr Ser Gln Val Met
 50 20 25 30
 51 Val Ala Pro Asn Ala Pro Thr Gly Tyr Thr Gly Val Ile Tyr / Thr Gly
 52 35 40 45
 53 Val Ala Pro Leu Val Asp Asn Asp Glu Thr Val / Lys Ala Leu Ala Ser
 54 50 55 60
 55 Lys Leu Pro Ser Leu Val Tyr Phe Asp Phe Asp Ser Asp Glu Ile Lys
 56 65 70 75 80
 57 Pro Gln Ala Ala Ala Ile Leu Asp Glu Gln Ala Gln Phe Leu Thr Thr
 58 85 90 95

ENTERED

L1 111-111

158-172

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59 Asn Gln Thr Ala Arg Val Leu Val Ala Gly His Thr Asp Glu Arg Gly
 60 100 105 110
 61 Ser Arg Glu Tyr Asn Met Ser Leu Gly Glu Arg Arg Ala Val Ala Val
 62 115 120 125
 63 Arg Asn Tyr Leu Leu Gly Lys Gly Ile Asn Gln Ala Ser Val Glu Ile
 64 130 135 140
 65 Ile Ser Phe Gly Glu Glu Arg Pro Ile Ala Phe Gly Thr Asn Glu Glu
 66 145 150 155 160
 67 Ala Trp Ser Gln Asn Arg Arg Ala Glu Leu Ser Tyr
 68 165 170

70 <210> SEQ ID NO: 3
 71 <211> LENGTH: 519
 72 <212> TYPE: DNA
 73 <213> ORGANISM: Moraxella catarrhalis
 75 <400> SEQUENCE: 3

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77 acaggctgt	ccaataaa	atc aacaagtca	ttatgggt	ctccta	atgc acccacagg	120										
78 tacactgggg	ttatctata	tc tgggttgca	ccttggtag	ataatgtga	gaccgttaag	180										
79 gctctagcaa	gcacgctacc	cagttgggt	tat	tttgact ttgattctga	tgagat	240										
80 ccgcaagctg	ctgcccatt	ttt agacgaacaa	gcacaat	ttt taaccaccaa	tcaaacagct	300										
81 cgtgttttgg	ttgcagg	tc taccgtat	cg	tggttagtc	gtgagtaa	360										
82 ggggaacgtc	gtgcgg	ttggc	ggtacgcaac	tat	tgcactg	420										
83 a	gcgtt	gaga ttatc	atgttt	ttgtgaagaa	cgcctatcg	480										
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87 <211>	LENGTH:	172														
88 <212>	TYPE:	PRT														
89 <213>	ORGANISM:	Moraxella catarrhalis														
91 <400>	SEQUENCE:	4														
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93 1				5		10							15			
94 Leu	Thr	Phe	Met	Thr	Gly	Cys	Ala	Asn	Lys	Ser	Thr	Ser	Gln	Val	Met	
95 20						25							30			
96 Val	Ala	Pro	Asn	Ala	Pro	Thr	Gly	Tyr	Thr	Gly	Val	Ile	Tyr	Thr	Gly	
97 35						40							45			
98 Val	Ala	Pro	Leu	Val	Asp	Asn	Asp	Glu	Thr	Val	Lys	Ala	Leu	Ala	Ser	
99 50						55							60			
100 Thr	Leu	Pro	Ser	Leu	Val	Tyr	Phe	Asp	Phe	Asp	Ser	Asp	Glu	Ile	Lys	
101 65						70							75			80
102 Pro	Gln	Ala	Ala	Ala	Ile	Leu	Asp	Glu	Gln	Ala	Gln	Phe	Leu	Thr	Thr	
103 85													90			95
104 Asn	Gln	Thr	Ala	Arg	Val	Leu	Val	Ala	Gly	His	Thr	Asp	Glu	Arg	Gly	
105 100													105			110
106 Ser	Arg	Glu	Tyr	Asn	Met	Ser	Leu	Gly	Glu	Arg	Arg	Ala	Val	Ala	Val	
107 115													120			125
108 Arg	Asn	Tyr	Leu	Leu	Gly	Lys	Gly	Ile	Asn	Gln	Ala	Ser	Val	Glu	Ile	
109 130													135			140
110 Ile	Ser	Phe	Gly	Glu	Glu	Arg	Pro	Ile	Ala	Phe	Gly	Thr	Asn	Glu	Glu	
111 145													150			160

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112 Ala Trp Ser Gln Asn Arg Arg Ala Glu Leu Ser Tyr
 113 165 170
 115 <210> SEQ ID NO: 5
 116 <211> LENGTH: 519
 117 <212> TYPE: DNA
 118 <213> ORGANISM: Moraxella catarrhalis
 120 <400> SEQUENCE: 5
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 122 acaggctgtg ccaataaaatc aacaagtcaa gttatggttt ctcctaattgc acccacaggt 120
 123 tacactgggg ttatctatac tggtgttgca ccttggtag ataatgatga gactatcaag 180
 124 actttggcaa gcacgctacc cagtttggtt tattttgact ttgattctga tgagattaaa 240
 125 ccgcaagctg ctgccatctt agacgaacaa gcacaatttt taaccaccaa tcaaacagct 300
 126 cgtgttttgg ttgcagggtca taccgatgag cgtggtagtc gtgagttaa tatgtcactg 360
 127 ggggaacgcc gtgcgggtggc ggtacgcaac tatttgcttg gtaaaggcat taatcaagcc 420
 128 agcgttgaga ttatcagttt tggtaagaa cgcctatcg catttggcac aaatgaagaa 480
 129 gcatggtcac aaaatcgctg tgctgaactg tcttattaa 519
 131 <210> SEQ ID NO: 6
 132 <211> LENGTH: 172
 133 <212> TYPE: PRT
 134 <213> ORGANISM: Moraxella catarrhalis
 136 <400> SEQUENCE: 6
 137 Met Met Leu His Ile Gln Ile Ala Ala Ala Ala Ala Leu Ser Val
 138 1 5 10 15
 139 Leu Thr Phe Met Thr Gly Cys Ala Asn Lys Ser Thr Ser Gln Val Met
 140 20 25 30
 141 Val Ala Pro Asn Ala Pro Thr Gly Tyr Thr Gly Val Ile Tyr Thr Gly
 142 35 40 45
 143 Val Ala Pro Leu Val Asp Asn Asp Glu Thr Ile Lys Thr Leu Ala Ser
 144 50 55 60
 145 Thr Leu Pro Ser Leu Val Tyr Phe Asp Phe Asp Ser Asp Glu Ile Lys
 146 65 70 75 80
 147 Pro Gln Ala Ala Ala Ile Leu Asp Glu Gln Ala Gln Phe Leu Thr Thr
 148 85 90 95
 149 Asn Gln Thr Ala Arg Val Leu Val Ala Gly His Thr Asp Glu Arg Gly
 150 100 105 110
 151 Ser Arg Glu Tyr Asn Met Ser Leu Gly Glu Arg Arg Ala Val Ala Val
 152 115 120 125
 153 Arg Asn Tyr Leu Leu Gly Lys Gly Ile Asn Gln Ala Ser Val Glu Ile
 154 130 135 140
 155 Ile Ser Phe Gly Glu Glu Arg Pro Ile Ala Phe Gly Thr Asn Glu Glu
 156 145 150 155 160
 157 Ala Trp Ser Gln Asn Arg Arg Ala Glu Leu Ser Tyr
 158 165 170
 160 <210> SEQ ID NO: 7
 161 <211> LENGTH: 519
 162 <212> TYPE: DNA
 163 <213> ORGANISM: Moraxella catarrhalis
 165 <400> SEQUENCE: 7
 166 atgatgttac atattcaaat tgccgctgtc gccggcgtt tatcggtact aacttttatg 60

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167	acaggctgtg	ccaataaaatc	aacaagtcaa	gttatggtttgc	ctcctaattgc	accacgggt	120										
168	tacgctggcg	ttatctacac	tggtgttgc	cctttggtag	ataatgtga	gaccgtcaag	180										
169	gctttggcaa	gcacgctacc	cagtttggtt	tatttgact	ttgattctga	tgagattaaa	240										
170	ccgcaagctg	ctgccatctt	agacgaacaa	gcacaatttt	taaccaccaa	tcaaacagct	300										
171	cgtgtttgg	ttgcaggtca	taccgatgag	cgtggtagtc	gtgagtataa	tatgtcactg	360										
172	ggggaaacgcc	gtgcgggtgc	ggtacgcaac	tatggctta	gtaaaggcat	caatcaagcc	420										
173	agcgttgaga	ttatcgtttt	ttgtgaagaa	cgcccstatcg	catttggcac	aaatgaagaa	480										
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177	<211>	LENGTH:	172														
178	<212>	TYPE:	PRT														
179	<213>	ORGANISM:	Moraxella catarrhalis														
181	<400>	SEQUENCE:	8														
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183	1				5					10					15		
184	Leu	Thr	Phe	Met	Thr	Gly	Cys	Ala	Asn	Lys	Ser	Thr	Ser	Gln	Val	Met	
185					20					25					30		
186	Val	Ala	Pro	Asn	Ala	Pro	Thr	Gly	Tyr	Ala	Gly	Val	Ile	Tyr	Thr	Gly	
187					35				40					45			
188	Val	Ala	Pro	Leu	Val	Asp	Asn	Asp	Glu	Thr	Val	Lys	Ala	Leu	Ala	Ser	
189					50				55					60			
190	Thr	Leu	Pro	Ser	Leu	Val	Tyr	Phe	Asp	Phe	Asp	Ser	Asp	Glu	Ile	Lys	
191					65			70			75				80		
192	Pro	Gln	Ala	Ala	Ala	Ile	Leu	Asp	Glu	Gln	Ala	Gln	Phe	Leu	Thr	Thr	
193						85				90				95			
194	Asn	Gln	Thr	Ala	Arg	Val	Leu	Val	Ala	Gly	His	Thr	Asp	Glu	Arg	Gly	
195					100				105					110			
196	Ser	Arg	Glu	Tyr	Asn	Met	Ser	Leu	Gly	Glu	Arg	Arg	Ala	Val	Ala	Val	
197					115			120			125						
198	Arg	Asn	Tyr	Leu	Leu	Ser	Lys	Gly	Ile	Asn	Gln	Ala	Ser	Val	Glu	Ile	
199					130			135			140						
200	Ile	Ser	Phe	Gly	Glu	Glu	Arg	Pro	Ile	Ala	Phe	Gly	Thr	Asn	Glu	Glu	
201					145			150			155				160		
202	Ala	Trp	Ser	Gln	Asn	Arg	Arg	Ala	Glu	Leu	Ser	Tyr					
203					165				170								
205	<210>	SEQ ID NO:	9														
206	<211>	LENGTH:	21														
207	<212>	TYPE:	DNA														
208	<213>	ORGANISM:	Artificial Sequence														
210	<220>	FEATURE:															
211	<223>	OTHER INFORMATION:	Primer sequence														
213	<400>	SEQUENCE:	9														
214	cccttattaa	ttgacaaatca	c														
216	<210>	SEQ ID NO:	10													21	
217	<211>	LENGTH:	19														
218	<212>	TYPE:	DNA														
219	<213>	ORGANISM:	Artificial Sequence														
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222	<223>	OTHER INFORMATION:	Primer sequence														

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224 <400> SEQUENCE: 10
225 ggcagagtga atcttaagc
227 <210> SEQ ID NO: 11
228 <211> LENGTH: 59
229 <212> TYPE: DNA
230 <213> ORGANISM: Artificial Sequence
232 <220> FEATURE:
233 <223> OTHER INFORMATION: Oligonucleotide
235 <400> SEQUENCE: 11
236 aagggcccaa ttacgcagag gggatccaat aaatcaacaa gtcaagttat gtttgctcc
238 <210> SEQ ID NO: 12
239 <211> LENGTH: 65
240 <212> TYPE: DNA
241 <213> ORGANISM: Artificial Sequence
243 <220> FEATURE:
244 <223> OTHER INFORMATION: Oligonucleotide
246 <400> SEQUENCE: 12
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248 tgacc
250 <210> SEQ ID NO: 13
251 <211> LENGTH: 16
252 <212> TYPE: PRT
253 <213> ORGANISM: Artificial Sequence
255 <220> FEATURE:
256 <223> OTHER INFORMATION: peptide
258 <400> SEQUENCE: 13
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260 1 5 10 15
262 <210> SEQ ID NO: 14
263 <211> LENGTH: 14
264 <212> TYPE: PRT
265 <213> ORGANISM: Artificial Sequence
267 <220> FEATURE:
268 <223> OTHER INFORMATION: peptide
270 <400> SEQUENCE: 14
271 Tyr Thr Gly Val Ala Pro Leu Val Asp Asn Asp Glu Thr Val
272 1 5 10

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/674,779B

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